THE FORMATION OF THE SYSTEM OF PRIORITIES OF THE CLUSTER POLICY OF THE REGION

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ABSTRACT

This article presents an analysis of approaches to the identification of the territorial cluster and supporting the development of territorial production clusters. We found significant differences between the approaches to defining priorities for development in the area of the clusters. There are also differences in the way support clusters that depend on the parameters of cluster development, market orientation and the level of maturity of the cluster. Presents the concept of regional support cluster initiatives to identify the most priority to support clusters.

Key Words: *Region, Industrial Cluster, Measures to Support Cluster Development, Clusters, Cluster Initiative, Cluster Policy Priorities*

INTRODUCTION

For development of economy of region it is necessary to use such form of organization and cooperation of labor, which would ensure the accumulation and effective use of resources of the territory. Such forms may include clusters.

According to Michael E. Porter "clusters are geographic concentrations of interconnected companies and institutions in a particular field" (Michael E. Porter, 1998, p. 7) that compete and collaborate at the same time.

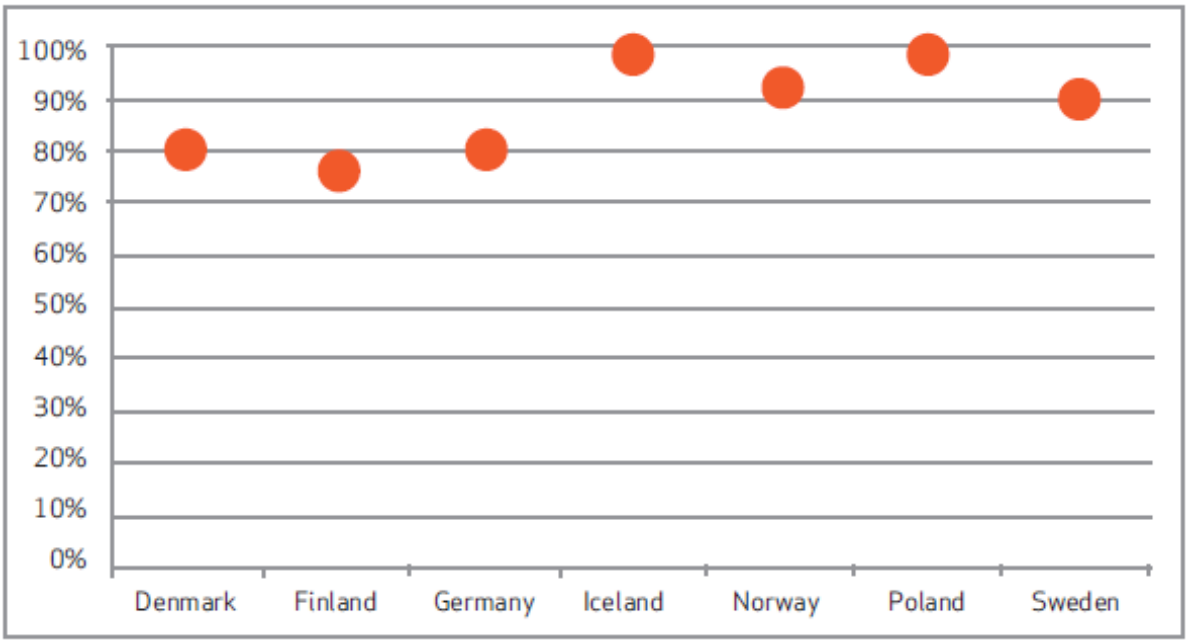
Clusters are networks of interacting companies, R&D institutions, universities and other relevant stakeholders whose activities result in the generation of new knowledge which translates into new products and services as well as innovations in processes, organizations and markets. According to (Porter, M. E., 1998), the local competition creates incentives to emulate best practice and boost pressures to innovate, while also connecting the strengths of competition with the virtues of selective cooperation. The concept of clusters was related to the "competitiveness" of industries and of nations. In a similar vein, van Dennerg and colleagues define clusters as "local or regional dimension of networks" (Van Dennerg, L., Braun, E., & van Winden, W., 2001, p.186).

Currently clusters are formed at the level of a region or entity of any system. As world practice shows, the initiators of cluster policy may serve as the Central management bodies that carry out cluster policy "from above" and the regional government or local business associations offering programmes to stimulate the development of clusters bottom-up. Such programs are called "cluster initiative", which is defined as organized efforts to increase growth and competitiveness of cluster within a region, involving cluster firms, government and research institutes (European Commission, 2006).

Clusters are not necessarily limited to administrative or geographical boundaries, but they have a geographical centre. The benchmarking of 143 cluster organizations in seven European countries in the context of the NGP Excellence project has shown that typically 75 to 95 per cent of the cluster participants are located within a distance of 150 kilometers from the cluster

management organization, which can be considered as the "node" of the cluster (Figure 1) (Lämmer-Gamp, Thomas/Meier zu Köcker, Gerd/Christensen, Thomas Alslev, 2011, p. 21).

Figure1
GEOGRAPHICAL CONCENTRATION OF CLUSTERS IN DIFFERENT EUROPEAN COUNTRIES



This proves that the support and development of clusters associated with the development of the territories therefore, cluster policy should be part of regional economic policy. Thus, the success of cluster development depends on the work cluster management organizations.

Key conditions for growth include the existence of linkages across cluster participants, the transformation of public into private science, the commercialization of new knowledge and the mobility of people to transfer knowledge and patterns of thinking between industry and the research sector. The growth has to be supported by a policy and program framework that creates conducive framework conditions and supports joint projects of the cluster participants (Sölvell, Örjan, 2009, p. 55).

Successful implementation of projects promotion of clusters possible in the presence of the regional strategy. When developing a regional strategy should address the key growth areas of the region as a whole.

METHOD

In the last decade, the study of the principles and mechanism of functioning of regional clusters is one of the most important and demanded areas of economic research worldwide.

The researchers of this problem under the economic cluster understand the concentration of similar, connected or complementary companies, which are characterized by the active interaction and transaction and are in dialogue, finding solutions to common problems.

They share a common infrastructure, labour market and services (Bergman E. M., Feser, E. J., 1999), including, companies in the cluster have equal access and use the products and

services of the financial market. As a result, the cluster contributes to economic growth, as each participant and the region as a whole.

It is possible for the following reasons:

1. clusters increase productivity because of access to resources, information, and institutions;
2. clusters increase the share of innovative products due to internal competition;
3. clusters accelerate the production process, attracting new firms and institutions;
4. clusters are doing more understandable and predictable business environment in the territory, thus improving the quality of regional strategic planning.

While there is an ongoing debate about how to identify and determine the degree of formation and boundaries of the cluster. This is the starting point of the analysis of the factors of cluster development, including identification of a set of measures to support the cluster.

Many scholars have promoted the idea of diversification methods for the identification of the cluster, depending on the level of analysis – national level, sectoral level and regional level (Solvel, O., Lindqvist, G., Ketels, CH., 2006).

In these works one can distinguish two groups of methods:

1. qualitative methods
2. quantitative methods

Among quantitative methods for the identification of a cluster can be identified:

1. the coefficient of localization (localization coefficients - LQ),
2. analysis of supply chains (input-output analysis) ,
3. dynamic structural analysis (shift-share analysis),
4. Giniho coefficient of localization,
5. Ellison and Glaeser index of agglomeration,
6. Maurel-Sédillot index.
7. The best-known qualitative methods include:
8. survey of experts and management of companies (interviews with experts and management of the firms),
9. questionnaire surveys (researches question-forms),
10. situational analysis (case studies).

Localization coefficients compare the characteristics of branches (number of employees, sales and added value) at the regional and national level. The results of the LQ show the dominant localization of enterprises in the given branches (Solvel, O., Lindqvist, G., Ketels, CH., 2006). The localization quotients for the number of employees is defined as follows

$$LQi = (zi/z) / (Zi/Z) (1) \quad (1)$$

where:
LQi is localization coefficient of the i-th branch (employees),
zi is the number of employees of the i-th branch in a region,
z is the total number of employees in the region,
Zi is the number of employees of the i-th branch in country,
Z is the total number of employees in country.

$$LQiv = (vi/v) / (Vi/V) \quad (2)$$

where:
LQivis localization coefficient of the i-th branch (turnover, value added)
vi is the value of output (turnover, value added) of the i-th branch in a region,
v is the value of output in the region,
Vi is the value of output (turnover, value added) of the i-th branch in country,
V is the value of output in country.

In determining the priority clusters in the regional industry, which will be given priority and support by the state, it must be assumed that the main purpose of state regulation of the investment process is the achievement and maintenance of a rational structure of the regional industrial complex (RIC), providing conditions for sustainable, progressive and integrated development of the region.

Therefore, for the selection of priorities of the cluster policy needs to be conducted functional analysis of the structure of the regional industrial complex (RIC) aimed at identifying the need and defining the directions of its rationalization.

As part of this analysis calculated indices of specialization, resulting in all branches of the RIC are divided into three groups:

1) Industry specialization (base), which are the basis of the regional industrial complex;
2) Supporting industries (their development is coordinated with the development of basic industries);
3) Service industry (local) that meet the needs of the region's population.

The backbone of the economy of each region is the branches of specialization with a high coefficient of localization. The clusters in these industries determine the stability of functioning and development of all other industries in the region. Therefore, you first need to make a study of the structure of regional production specialization, aimed at the assessment of their rationality and prioritization of cluster policy

It must be conducted the following study:

1. an estimate of how the development of this production enhance the stability of the profits of a RIC;
2. how much increased production and profits;
3. estimated increase in the number of jobs and incomes due to the development of this production.

In addition, to achieve a rational structure of the industry in the region, it is necessary to provide in its development a certain level of complexity.

RESULTS

The Republic of Tatarstan is a vivid example of development of cluster strategy of regional development. Research on natural resources-based clusters suggests that co-located firms in regional clusters exhibit high levels of inter-firm cooperation (Felzensztein, C., Gimmon, E., & Carter, S., 2010, p. 675).

Development of innovative economy of Tatarstan Republic is possible on the basis of creation and development of the cluster approach in the management of economic processes.

Clusters reflect specializations of regions in activities within which companies can gain higher productivity through accessing external economies of scale or other comparative advantages (OECD, 2009, p. 26).

In this regard, today in the Republic of Tatarstan you can select multiple clusters:

1. car location Naberezhnye Chelny, the anchor company of JSC "KAMAZ";
2. refining, petrochemical industry with the territorial affiliation of Nizhnekamsk and the anchor company OAO "Nizhnekamskneftekhim";
3. power with territorial affiliation Kazan and the anchor company of JSC "Tatenergo".

In addition to the generated clusters in the Republic of Tatarstan there are long-term, which include construction, agricultural and IT-cluster. These clusters are gradually evolving but there are various problems that hinder development. For example, in the construction cluster there is no anchor and no enterprise labor resources, therefore, the coefficient of localization is less than 25%. In the IT cluster is another problem that no appropriate labor resources for development of this sector. At the lowest level of development agro-industrial cluster, where in addition to Industry University nothing and therefore it is most difficult to develop. In this respect, it is necessary to create cluster option "top-down", where the cluster development strategy should propose the authorities, through the creation of special organizations for the management cluster.

The main strategic goal of the Republic of Tatarstan is to change the existing model of economic growth: from oil to innovation-based growth. In this regard, the government constantly supported the most important innovative processes, including the efficiency of the economy.

Based on the foregoing, we can suggest the following method of determining priority directions of the cluster policy of the region:

Stage 1.

1. Identifying sectors of regional specialization of industrial complex;
2. The division of all industries in these sectors into groups, fluctuations in which profits are determined by the same factors, therefore, these fluctuations have the same direction (related production; production, operating in one territorial market; production working for one user, etc.);

Stage 2.

1. Determining the proportion of each group of industries in total industrial production of the region and profits and their ranking;
2. Assessment of the likelihood and the possible amplitude of oscillation of the profits in the production of this group;
3. Assess impacts of possible market fluctuations of profits in the production of a selected group on the total profit in the industry;

Stage 3.

a. Determining the structure of the branches of specialization of RIC, providing sustainable development of the region – the balance of production, fluctuations in which profits are determined by unrelated factors;
b. Define indicators of the development of sectors and industries, ensuring the achievement of this structure.

CONCLUSION

Thus, as a priority for support measures for clusters are determined, the level of profit which does not depend on the factors determining fluctuations profit productions, selected at the 2nd stage. This production will help improve sustainability of profit RIC and thereby to the stability of budget revenues of the region.

In addition, to achieve a rational structure of the industry in the region, it is necessary to provide in its development a certain level of complexity.

You can offer as an indicator of the level of complexity of regional industries, the relationship between the demand of households in the region and supply the local production, defined by the following formula:

$$K = G/D , \quad (3)$$

where:

K - level complexity of RIC;

G – volume of production of consumer goods in the region serving (local) industries;

D – consumption industrial production of the region's population.

Thus, the Government of the Republic of Tatarstan, we propose to use the following indicators (Table 1).

Table 1
DEVELOPMENT INDICATORS SUPPORTING ENTERPRISES OPERATING IN THE LOCAL CONSUMER MARKET OF THE REPUBLIC OF TATARSTAN

The name of the indicator	The threshold value
K (t1) - the level of complexity of industry of the Republic at the end of period T	>= *Kmin (t1)*
G(t1) – the production volume of consumer goods production group M at the end of period T	>= *Gmin(t1)*
Gi(t1) -the production volume of product i at the end of period T including, production volume sub-industries: - woodworking industry; - building materials industry; - lightindustry; - food industry	>= *Gi min(t1)*

In turn, depending on the desired rate of growth of the underlying industries associated with this growth of household income and prospects of increasing domestic consumer demand, determined the need to develop service industries. On this basis, will identify priority clusters, due to the need of integrated development of RIC (Gabdrakhmanov N.K., 2014, p.393).

Earlier we found that on the territory of the Republic of Tatarstan there are two main clusters, havingdifferent relationship with financial institutions: energy and petrochemical clusters. In the energy sector pricing tariff and regulated by the state. The petrochemical sectors are more closely related to financial institutions and active use of modern financial instruments.

We also shure that the experience of functioning of the Russian and foreign capital market confirms the emergence of new prerequisites of the banking and industrial integration in connection with the transition to a qualitatively different level of globalization and internationalization of the economy.

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